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DENIS G MALONEY
FISH & RICHARDSON PC
225 FRANKLIN STREET
BOSTON, MA   021102804

EXAMINER
PORTER, RACHEL L

ART UNIT	PAPER NUMBER
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DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>06 August 2002</u> .

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-30</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-30</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>06 August 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Notice to the Applicant

1.   This communication is in response to the amendment filed on 8/6/02. Claims 1-30 are pending. Claims 1-5, 9 and 14 have been amended. Claims 15-30 are newly added.

Drawings

2.   The objections to the drawings are hereby withdrawn due to the amendment filed on 8/6/02.

Specification

3.   The objection to the disclosure for failing to include the application numbers/file date for the co-pending applications is hereby withdrawn due to the amendment filed on 8/6/02.

The amendment filed 8/6/02 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The newly recited "probabilistic confidence bounds describing uncertainty in measurements of availability . . . placed on the quality properties" of claim 28; "the availability queries . . .selected to increase the number of available solutions found or to increase the likelihood that the availability of the desirable solutions has been verified with high confidence" in claim 29;

"multiple responses, which contain different availability information and/or quality

properties are simultaneously maintained in the travel planning system" in claim 30.

In particular, the Applicant does not point to, nor was the Examiner able to find,

any support for this newly added claim language within the specification as originally

filed. As such, the Applicant is respectfully requested to clarify the above issues and to

specifically point out support for the newly added limitations in the originally filed

specification and claims, or to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 28-30 are rejected under 35 U.S.C. 112, first paragraph, as containing

subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the

application was filed, had possession of the claimed invention.

Claims 28-30 recite limitations that are new matter, as discussed in the

specification objection (paragraph 3 of the present Office Action), and are therefore

rejected.

NOTE: The art rejections for claims 28-30 are provided for the Applicant's

consideration on the condition that the Applicant provide a basis for support in the

originally filed specification for the limitations recited in claims 28-30 in the next

communication sent in response to the present Office Action.

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

Claims 1-14 and 29 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

In reference to claim 1, it remains unclear whether the term "process" in the claim

1 is intended to mean a component/article of manufcuture that performs the claimed

functions; a system with several *system components* (i.e. several articles of

manufacture) that perform the recited functions; or whether the Applicants intend to

claim a method (a process).   As explained in the previous Office Action (Paper No. 4),

the Examiner's interpretation of the term "process" to mean any system component(s)

that perform(s) the functions recited in the claim was for examination purposes only (i.e.

for the purpose of applying art) and was not intended to preclude amendments to clarify

the vague and indefinite claim language of claim 1.

On page 9, lines 9-12 of the response filed 8/6/02, the Applicant states that "the

recitation of [the] functions as processes . . . reads on a system including computer

processes that when executed perform the recited functions." While the preamble of

claim 1 recites a system, no system components are recited.   The body of the claim

merely recites functions or processes.   If the Applicant intends to claim an article(s) of

manufacture (e.g. computer program products) that cause(s) a computer to perform the

recited method when executed, the examiner suggests the following or similar claim language:

"A computer readable medium for storing computer readable code executed on a computer to perform the following:

- a scheduling step for (-OR- scheduling instructions for). . .

- a faring step for (-OR- faring instructions for). . .

- an availability step for(-OR- availability instructions for). . . ."

Claims 2-14 depend on claim 1 and therefore inherit the deficiencies of the base claim (claim 1) through dependency and are also rejected.

7.   Claims 5 and 9 recite the limitation "*the sources* of seat availability". There is insufficient antecedent basis for this limitation in these claims. In claim 3, on which these claims depend, "*at least one source* of seat availability information" is claimed. For the purposes of examination only, the examiner will interpret this to mean that the claims 5 and 9 use "*at least one source* of seat availability information."

8.   Claim 29 recites the limitation "the availability queries to be performed . . ." in lines 1-2 of the claim. There is insufficient antecedent basis for this limitation in the claim. Claims 1 and 29 do not recite that "availability queries" are performed.

9.   The rejection of claim 9, for use of the phrase "such as", is hereby withdrawn due to the amendment filed on 8/6/02.

10.   The rejection of claim 1 under 35 U.S.C. 112, second paragraph, for lack of clarity regarding the phrase "a single source of seat availability for a mode of transportation," is hereby withdrawn due to the amendment filed on 8/6/02.

11.   The rejection of claims 3 and 4 for insufficient antecedent basis for the limitation

"sources of seat availability" is hereby withdrawn due to the amendment filed on 8/6/02.

12.   The rejection of claim 14 under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to explain what is done with the travel planning process data and

how this data relates to the intelligent client, is hereby withdrawn due to the amendment

filed on 8/6/02.

Response to Arguments

13.   Applicant's arguments with respect to claims 1-13 and15-30 have been

considered but are moot in view of the new ground(s) of rejection.

14.   Applicant's arguments filed August 6, 2002 have been fully considered but they

are not persuasive.

On page 12, lines 13-18 of the response filed on 8/6/02, the Applicant alleges

that claim 14 is patentable over the art of record, namely Lynch'094 in view of Slotznick,

because Slotznick does not teach an intelligent client for processing and integrating

scheduling and fare information and availability data in a travel planning system.

In response to applicant's arguments against the references individually, one

cannot show nonobviousness by attacking references individually where the rejections

are based on combinations of references. See In re Keller, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir.

1986). The Lynch'094 provides a travel planning system as set forth in claim 1 while

the Slotznick reference was relied upon to disclose the use of an intelligent client

(agent) to accomplish delegated tasks such as preparing and arranging travel

reservations. (i.e. further processing and integration of travel data) (column 13, lines 1-

23). In the present case, the Examiner respectfully notes that the motivation to combine

the applied references used for the art rejection of claim 14 are accompanied by select

portions of the respective reference(s) which specifically support that particular

motivation.

Furthermore, although the Examiner acknowledges that the motivation or

suggestion to make modifications must be articulated, it is respectfully contended that

there is no requirement that the motivation to make modifications must be expressly

articulated within the references themselves. References are evaluated by what they

suggest to one versed in the art, rather than by their specific disclosures, *In re Bozek,*

163 USPQ 545 (CCPA 1969). As such, it is not seen that the Examiner's combination

of references is unsupported by the applied prior art of record. Rather, it is respectfully

submitted that explanation based on the logic and scientific reasoning of one ordinarily

skilled in the art at the time of the invention that support a holding of obviousness has

been adequately provided by the motivations and reasons indicated by the Examiner

the prior Office Action (Paper No. 4).

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the
United States before the invention thereof by the applicant for patent, or on an international application
by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this
title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) do not apply to the examination of this application as the application

being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily

published under 35 U.S.C. 122(b). Therefore, this application is examined under 35

U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

15.   Claims 15, 19,21,22 and 26 are rejected under 35 U.S.C. 102(e) as being

anticipated by Lynch et al US Patent No. 6,119,094). (This reference will be referred to

as Lynch '094 throughout this action).

In reference to claim 15, Lynch'094 teaches a computer program product for use

with a travel planning system for determining availability of a seat for a mode of

transportation, comprises instructions for causing a computer to:

- receive a set of instances of transportation that satisfy a user query; ((col. 4,

     lines 62-col. 5, line 6; col. 6, lines 41-56; col. 6, line 59-col. 7, line 2; col. 7,

     lines 8-20; lines 29-32; col. 9, line 47-col. 10, line 5)

- determine quality of availability information to guide a travel planning system

     to determine a subsequent set of available instances of transportation.

     (column 2, lines 60-65; figure 3, column 6, lines 11-57, col. 7, lines 46-49; col.

     9, lines 11-30)

Insofar as the system of Lynch'094 uses computers, software module(s) and/or sub-

module(s) to perform the recited steps of claim 5 (col. 3, lines 21-51), it is respectfully

submitted that the system/method includes a computer program product comprising

instructions for causing a computer to perform the recited steps.

In reference to claim 19, Lynch '094 teaches the computer program product of claim 15 as explained in the rejection of claim 15, and wherein the sources of seat availability information generate replies with differing quality properties including at least one of freshness, confidence, precision, and validity. The freshness of the data (i.e. the time that has elapsed since the inventory data was obtained) varies for the sources, especially when the sources are queried sequentially (Figure 3, column 6, lines 11-17).

In reference to claim 21, Lynch'094 teaches a method for determining availability of a seat for a mode of transportation (i.e. travel service inventory), comprising: evaluating quality of availability information received from a source of availability information for a set of instances of transportation to determine a set of available instances of transportation, to guide a travel planning system in determining a subsequent set of available instances of transportation. (column 2, lines 60-65; figure 3; column 6, lines 11-57; col. 7, lines 29-32, 46-49; col. 9, lines 11-30)

In reference to claim 22, Lynch'094 the method of claim 21 further comprising: receiving the set of instances of transportation from a travel planning system in response to a user query. (col. 4, lines 62-col. 5, line 6; col. 6, line 59-col. 7, line 2)

In reference to claim 26, the limitations of this claim are addressed by the rejections of claims 19 and 21, and incorporated herein.

Claim Rejections - 35 USC § 103

16.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

17.   Claims 1-4,9, 11-13, 16,23,29 and 30 are rejected under 35 U.S.C. 103(a) as

being unpatentable over by Lynch et al (US Patent No. 6,119,094). (This reference will

be referred to as Lynch '094 throughout this action).

In reference to claim 1, Lynch '094 teaches a travel planning system comprising:

-   a scheduling component that determines a set of travel options (i.e.

    transportation instances) to satisfy a user's request (column 2, lines 57-60;

    col. 9, lines 52-67)

-   a faring component to determine valid fares for some of the travel options

    (col. 2, lines 60-65; col. 8, lines 32-55)

-   an (availability) component to search a source of seat availability information

    for a mode of transportation to determine a set of available travel options (i.e

    instances of transportation) (col. 6, lines 41-56; col. 7, lines 8-20; lines 29-32;

    col. 9, line 47-col. 10, line 5) and to determine quality properties of the

    availability information to guide the travel planning system to determine a

    subsequent set of available travel options (i.e. instances of transportation)

    (column 2, lines 60-65; figure 3, column 6, lines 11-57, col. 7, lines 46-49)

A system component assesses the age of the information (i.e. the system determines

whether or not a predetermined time period has lapsed since the information was last

obtained). A system component also determines whether the obtained travel data fall

within certain parameters.   Thus, a system component determines quality properties of the availability data (figure 3, column 6, lines 11-17). The system may then update the stored availability data if the predetermined time period has elapsed, and the updated inventory is repeatedly sifted through to produce candidate pools of solutions. (i.e. to guide the system to a subsequent set of available travel options/instances of transportation.)

Lynch'094 teaches a system with at least one component to perform the recited functionalities of the availability component.   However, it is unclear whether a single component performs all of the recited functions or whether these functions are carried out by more than one component. At the time of the Applicant's invention, it would have been obvious to one of ordinary skill in the art to modify the system of Lynch'094 to have the functions are performed by a single (availability) component. One would have been motivated to do this to maximize the use of each component in a system with limited resources.

In reference to claim 2, Lynch '094 teaches a system wherein the availability component determines whether the source of availability information is reliable, and if the results are not reliable, the availability component checks makes a second set of seat availability queries to the same or a different source of availability information. (col. 3, lines 35-42; col. 6, lines 22-48). A component of the system determines whether a predetermined time period has elapsed since the data in system inventory database has been obtained (i.e. determining whether the data is outdated/not reliable). If the time period has elapsed, the system component queries the same or different computer

reservation system(s) (i.e. sources of seat availability information) to obtain more current inventory data. (col. 6, lines 22-38)

In reference to claim 3, Lynch '094 teaches that the method of claim 1 as explained in the rejection of claim 1. Furthermore, Lynch teaches a system wherein a system component (i.e. the availability component) may make multiple, sequential queries to the at least one source of seat availability information. (column 6, lines 11-38)

In reference to claim 4, Lynch '094 teaches that the method of claim 2 as explained in the rejection of claim 2. Furthermore, Lynch teaches a system wherein a system component (i.e. the availability component) makes multiple, simultaneous queries to multiple sources of seat availability information (i.e. computer reservations systems). (column 6, lines 11-38)

In reference to claims 11-13, Lynch'094 teaches a system wherein speculative calculations (i.e. genetic algorithms) are used to develop a variety of possible travel options (speculative travel options) based loosely upon a user's travel request. (column 7, lines 29-45). The system uses internal (system inventory database) and external (CRS's) availability sources (e.g. inventory data for flights, car rentals) to sift through a plurality of candidate pool solutions and to evaluate the "fitness" of various solutions. It is respectfully submitted that the ability so the system to evaluate varying degrees of fitness indicates that data of varying qualities (varying degrees of fitness) may be identified as possible solutions/options by the system. Thus the system treats low quality data as though it were high quality/certain data.

In reference to claim 16, Lynch'094 teaches the computer program product of claim 15 as explained in the rejection of claim 15. Lynch'094 further teaches a computer program product comprising instructions to send seat availability queries to a one or more computer reservation systems (sources of seat availability information) if the information is outdated (i.e. results from first source(s) are not reliable). (column 6, lines 22-25). It is unclear from the reference whether the system queries the same or different source(s) of seat availability information, but the system does repeatedly query various sources for seat availability data. (col. 6, lines 22-38) At the time of the Applicant's invention, it would have been obvious to one of ordinary skill in the art to query one or more different sources of seat availability information if the results from the first are not reliable. As suggested by Lynch'094, one would have been motivated to do this to maximize the likelihood that the system will identify a plurality of (low-cost) travel arrangements to be offered to a customer while minimizing the involvement of a travel agent. (col. 1, lines 66-col. 2, line 2, lines 19-22).

In reference to claim 23, the limitations of this claim are addressed by the rejections of claims 16 and 21, and incorporated herein.

In reference to claim 29, Lynch'094 teaches the travel planning system of claim 1 as explained in the rejection of claim 1, wherein the availability queries to be performed are selected to increase the number of available solutions found (col. 6, lines 25-38) or to increase the likelihood that the availability of the desirable solutions has been verified with high confidence. (col. 6, lines 37-57; col. 7, line 29-col. 8, line 18) The system of Lynch'094 searches multiple reservation systems, thereby increasing the number of

available solutions. Furthermore, the system of Lynch'094 repeatedly updates

availability stored inventory data, tests the fitness of solutions, and sifts through a

plurality of candidate pools, thereby increasing the likely that the information (the

desirable solutions) is accurate. (i.e. has been verified with high confidence)

In reference to claim 30, Lynch'094 teaches the travel planning system of claim 1

wherein multiple responses which contain different availability information and/or quality

properties are simultaneously maintained in the travel planning system. (col. 4, lines 6-

41; col. 6, lines 11-38) The inventory database maintains information from various

computer reservation systems (i.e. multiple responses) on travel service inventory,

available fare classes, carriers providing service, and description of available service

types. (i.e. different quality properties/different availability information).

18.   Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over by

Lynch et al (US Patent No. 6,119,094-- referred to as Lynch '094) in view of Official

Notice. (This reference will be throughout this action).

In reference to claim 28, Lynch'094 teaches the system of claim 1 as explained in

the rejection of claim 1. Lynch'094 also teaches the use of genetic algorithms to sift

through possible solutions (candidate pools) to determine the fitness of various travel

options (i.e. solution) (col. 6, lines 41-56). Lynch'094 does not specifically disclose the

use of "probabilistic confidence bounds describing uncertainty in measurements" for the

solutions. However, it is respectfully submitted that the use of confidence intervals (e.g.

"probabilistic confidence bounds describing uncertainty in measurements") are

commonly used in mathematic/probability calculations. At the time of the Applicant's

invention, it would have been obvious to one of ordinary skill in the art to include such confidence intervals in the calculations performed by the system of Lynch'094. One would have been motivated to do this to monitor the accuracy and reliability of the obtained data, and to enable users to adjust the intervals to increase or decrease the number of candidate pools created to further assist the system in identifying a plurality of low-cost travel options for travelers.

19.   Claims 5-8, 10, 18,20,25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch et al (US Patent No. 6,119,094-referred to hereinafter as Lynch'094) in view of Lynch et al (US Patent No. 5,839,114—referred to hereinafter as Lynch'114) for substantially the same reasons given in the previous Office Action (Paper No. 4).   Further reasons appear hereinbelow.

In reference to claim 5, Lynch'094 teaches the travel planning system of claim 3 as explained in the rejection of claim 3.   Lynch '094 does not specifically teach that there are different costs associated with accessing the different sources of seat availability information, but does teach that the system accesses plurality of availability sources. (col. 6, lines 22-38). Lynch '114 teaches it is well known in the art that different sources of seat availability data (e.g. proprietary CRS's) often have differential costs associated with accessing/obtaining availability information. (column 1, lines 21-38) At the time of the applicants' invention, it would have been obvious to one of ordinary skill in the art that the sources of availability data in the system of Lynch '094 would have different costs (i.e. fixed/marginal costs including time, communication, computation, and monetary costs) associated with accessing seat availability data. One would have

been motivated to include these charges to ensure that the CRS providers are fairly

compensated (e.g. compensated on a per use basis) for the use and maintenance of

their data systems.

Claims 6-8 and 10 have not been amended. As such, claims 6-8 and 10 are

rejected for the same reasons given in the previous Office Action (Paper No. 4) and

incorporated herein.

In reference to claim 18, Lynch'094 teaches the computer program product of

claim 15 as explained in the rejection of claim 15. Lynch '094 does not specifically

teach that there are different costs associated with accessing the different sources of

seat availability information, but does teach that the system accesses plurality of

availability sources. (col. 6, lines 22-38) Also, Lynch'094 teaches that a threshold limit

can be set for how often the availability component accesses the sources of seat

availability data (col. 6, lines 12-21), but does not specifically teach that this limit is for

cost containment purposes. Lynch '114 teaches it is well known in the art that different

sources of seat availability data (e.g. proprietary CRS's) often have differential costs

associated with for accessing/obtaining availability information. (column 1, lines 21-38)

At the time of the applicants' invention, it would have been obvious to one of ordinary

skill in the art that the sources of availability data in the system of Lynch '094 would

have different costs (i.e. fixed/marginal costs including time, communication,

computation, and monetary costs) associated with accessing seat availability data. One

would have been motivated to include these charges to ensure that the CRS providers

are fairly compensated (e.g. compensated on a per use basis) for the use and

maintenance of their data systems.

Furthermore, Lynch'114 teaches an automated travel planning system wherein

a threshold is set to help control the costs of accessing availability data (i.e. setting a

threshold limit on the availability process to access the availability sources). The

system calculates which source of seat availability data will optimize the hits-to-

bookings ratio for the user and thereby lower the costs or fees charged to user. (column

1, lines 26-38; col. 2, lines 31-38) The system stores the target hits-to-booking ratio (i.e.

threshold) for each availability source and determines whether that source should be

accessed based on its target hits-to-booking ratio (i.e. threshold) (figure 3; col. 6, lines

4-10) At the time of the applicant's invention, it would have been obvious to one of

ordinary skill in the art to further modify the system (and computer program product) of

Lynch'094 with the teachings of Lynch'114 so that the thresholds are used to control

costs associated with accessing availability data. One would have been motivated to

ensure that system user is aware of the costs of arranging travel, and is therefore more

economical in using the resources.

In reference to claim 20, Lynch'094 teaches the computer program product of

claim 15, as explained in the rejection of claim 15. Lynch'094 does not teach that the

availability process determines the tradeoffs between costs of accessing the data and

the properties of the response, but does disclose that a primary goal of the automated

system is minimize travel expenses for the user by developing low-cost travel options.

(col. 2, lines 14-21).   Lynch'114 teaches an automated travel planning system (i.e.

computer instructions) to determine the tradeoffs between costs of accessing the data

and the properties of the response. (column 2, lines 31-38; column 4, lines 26-42) The

system determines the likelihood that accessing a particular CRS will result booking or

not. Successful booking decreases the user's hits-to-booking ratio and lowers the cost

of accessing the availability source (col. 1, lines 19-38) Accessing the source (CRS)

without booking through that CRS increases the ratio and will result in the user paying

(or paying more) to access the availability source. At the time of the applicants'

invention, it would have been obvious to one of ordinary skill in the art to modify the

teachings of Lynch'094 so that the cost of accessing a resource are weighed against

benefits gained by accessing that resource. One would have been motivated to do this

to minimize costs for the user seeking a plurality of low-cost travel options while also

minimizing the time required to access these options (Lynch'094: col. 2, lines 14-21).

In reference to claim 25, the limitations of this claim are addressed by the

rejection of claims 18 and 21, and incorporated herein.

In reference to claim 27, the limitations of this claim are addressed by the

rejections of claims 20 and 21, and incorporated herein.

20.   Claim 9, 17 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Lynch'094 as applied to claims 1 and 3 above in view of Walker et al (US Patent

No. 5,897,620—referred to hereinafter as Walker).

In reference to claim 9, Lynch '094 teaches the system of claim 3 as explained in

the rejection of claim 3. Lynch'094 does not specifically disclose that that the sources of

availability data are sources of predicted availability information, but does teach

querying a plurality of availability data sources that have different data quality properties associated the replies generated from the queries. The freshness of the data (i.e. the time that has elapsed since the inventory data was obtained) varies for the sources. (Figure 3, column 6, lines 11-17). Walker teaches that the use of forecasted inventory data (i.e. predicted availability information) from a predicted availability source (e.g. RMS) for arranging and pricing travel/ transportation options is well known in the art. (col. 6, lines 9-26). At the time of the Applicant's invention, it would have been obvious to one of ordinary skill in the art to that the availability sources queried to determine a set of potential travel options for a user in the system of Lynch'094 include predicted availability information (i.e. forecasted inventory data). One would have been motivated to include forecasted inventory data in the data provided by the availability sources to permit travel service providers (e.g. airlines) to post travel information for users to review and/or select while minimizing system downtime associated with constant real-time availability data updates.

In reference to claim 17, Lynch'094 teaches that the computer program product of claim 15 as explained in the rejection of claim 15. Lynch'094 further teaches a computer implemented method wherein a system component (i.e. the availability component) can make multiple, sequential queries to send availability queries to multiple sources of seat availability information. (column 6, lines 11-38) Lynch'094 does not specifically disclose that that the sources of availability data are sources of predicted availability information (i.e. sources that predict seat availability information). Walker teaches that the use of forecasted inventory data (i.e. predicted availability information)

from a predicted availability source (e.g. RMS) for arranging and pricing travel/ transportation options is well known in the art. (col. 6, lines 9-26). At the time of the Applicant's invention, it would have been obvious to one of ordinary skill in the art to that the availability sources queried to determine a set of potential travel options for a user in the system of Lynch'094 include predicted availability information (i.e. forecasted inventory data). One would have been motivated to include forecasted inventory data in the data provided by the availability sources to permit travel service providers (e.g. airlines) to post travel information for users to review and/or select while minimizing system downtime associated with constant real-time availability data updates.

In reference to claim 24, the limitations of this claim are addressed by the rejections of claims 17 and 21, and incorporated herein.

21. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch'094 in view of Slotznick (US 5,983,200).

The amendment to claim 14 were apparently made to overcome the under 35 U.S.C. 112, second paragraph, as being indefinite for failing to explain what is done with the travel planning process data and how this data relates to the intelligent client. However, these changes do no affect the scope and breadth of the claim as originally presented and/or interpreted by the Examiner when applying prior art within the previous Office Action (Paper No. 4). As such, these limitations are rejected under the same rationale given in the previous Office Action (Paper No. 4), and incorporated herein.

Conclusion

22.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

- O'Brien (US 5,832,453) teaches a system for determining travel options for

    an organization using predicted availability data.

- Kanou (JP Patent No.: JP7230509 A) teaches a reservation system that

    verifies and updates seat availability data.

- Hornick (US Patent No. 5,270,921) teaches an airline reservation system that

    uses marginal seat revenue to determine fares.

- Baglino ("Hoteliers Report. . .) teaches a problems with the reliability of data

    from CRS's.

23.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel L. Porter whose telephone number is 703-305-0108. The examiner can normally be reached on M-F, 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on (703)305-9588. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

RP
RP
November 4, 2002

JOSEPH THOMAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600